

Claims:

1. A process for the preparation of an orally  
administrable calcium composition, said process  
5 comprising the steps of:

(i) obtaining a physiologically tolerable  
particulate calcium compound having a mean particle size  
in the range 3 to 40 $\mu$ m, having a crystalline structure  
and having a surface area of 0.1 to 1.2 m<sup>2</sup>/g;

10 (ii) mixing said calcium compound with a water-  
soluble diluent and an aqueous solution of a water  
soluble binder in a fluid bed granulation apparatus and  
drying the resulting mixture to produce a first  
granulate;

15 (iii) optionally mixing said first granulate with  
one or more further components to produce a second  
granulate; and

(iv) optionally compressing said first or second  
granulate to form tablets.

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2. A process as claimed in claim 1 wherein said  
calcium compound is selected from calcium carbonate,  
calcium lactate, calcium gluconate, calcium citrate,  
calcium glycerophosphate, calcium phosphate, calcium  
25 hydrogen phosphate, calcium glucuronate, calcium  
aspartate, calcium glucoheptonate and mixtures of two or  
more thereof.

3. A process as claimed in claim 1 wherein said  
30 calcium compound is calcium carbonate.

Sub A1 4. A process as claimed in any one of claims 1 to 3  
wherein said calcium compound makes up 68 to 80% wt. of  
said first granulate.

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5. A process as claimed in any one of claims 1 to 4  
wherein said calcium compound makes up 60 to 95% wt. of

Sub A' → said second granulate.

5 6. A process as claimed in any one of claims 1 to 5 wherein in step (i) the same material is used as said diluent and as said binder.

10 7. A process as claimed in any one of claims 1 to 6 wherein said water-soluble diluent comprises at least one sweetener.

15 8. A process as claimed in claim 7 wherein said sweetener is selected from sorbitol, xylitol, isomalt, mannitol, sucrose, fructose, maltodextrin, inulin and oligofructose.

20 Sub A2 → 9. A process as claimed in any one of claims 1 to 8 wherein said water-soluble diluent makes up 70 to 96% wt. of the total weight of said water-soluble diluent and said water-soluble binder in said first granulate.

25 10. A process as claimed in any one of claims 1 to 9 wherein said water-soluble binder is selected from celluloses, polysaccharides, maltodextrin, inulin and polyvinylpyrrolidone.

30 11. A process as claimed in any one of claims 1 to 10 wherein said water-soluble binder is a polyvinylpyrrolidone

35 12. A process as claimed in any of claims 1 to 11 wherein said first granulate has a particle size distribution of  $D(V, 0.1) = 15-21 \mu\text{m}$ ,  $D(V, 0.5) = 70-120 \mu\text{m}$  and  $D(V, 0.9) = 190-330 \mu\text{m}$ .

40 13. A process as claimed in any one of claims 1 to 12 wherein a said further component is mixed with said first granulate, said further component being selected

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Sub A2  
from: vitamin B<sub>6</sub>, vitamin K, vitamin C, vitamin D,  
isoflavones, inulin, and oligofructose and mixtures of  
two or more thereof.

5 14. A process as claimed in any one of claims 1 to 13  
wherein in step (ii) said calcium compound is also mixed  
with isoflavones.

10 15. A granulate comprising a fluid bed granulation  
granulate product of a physiologically tolerable calcium  
compound, a water-soluble binder and a water-soluble  
diluent, said calcium compound having a mean particle  
size in the range 3 to 40 $\mu$ m, having a crystalline  
structure and having a surface area of 0.1 to 1.2 m<sup>2</sup>/g.

15 16. A granulate as claimed in claim 15 further  
comprising a lubricant.

20 17. A granulate as claimed in either of claims 15 and  
16 wherein said calcium compound is selected from  
calcium carbonate, calcium lactate, calcium gluconate,  
calcium citrate, calcium glycerophosphate, calcium  
phosphate, calcium hydrogen phosphate, calcium  
glucuronate, calcium aspartate, calcium glucoheptonate  
25 and mixtures of two or more thereof.

30 18. A granulate as claimed in any one of claims 15 to  
17 said diluent is a sweetener selected from sorbitol,  
xylitol, mannitol, sucrose, fructose, maltodextrin,  
inulin and oligofructose.

35 19. A granulate as claimed in any one of claims 15 to  
18 wherein said water-soluble binder is selected from  
celluloses, polysaccharides, maltodextrin, inulin and  
polyvinylpyrrolidone.

20. A granulate as claimed in any one of claims 15 to

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21. A tablet comprising a compressed granulate as claimed in any one of claims 15 to 20 containing: calcium carbonate; vitamin D<sub>3</sub>; a lubricant; citric acid; and an oligosaccharide.